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Native American Broad Band High Speed Networking Consortium

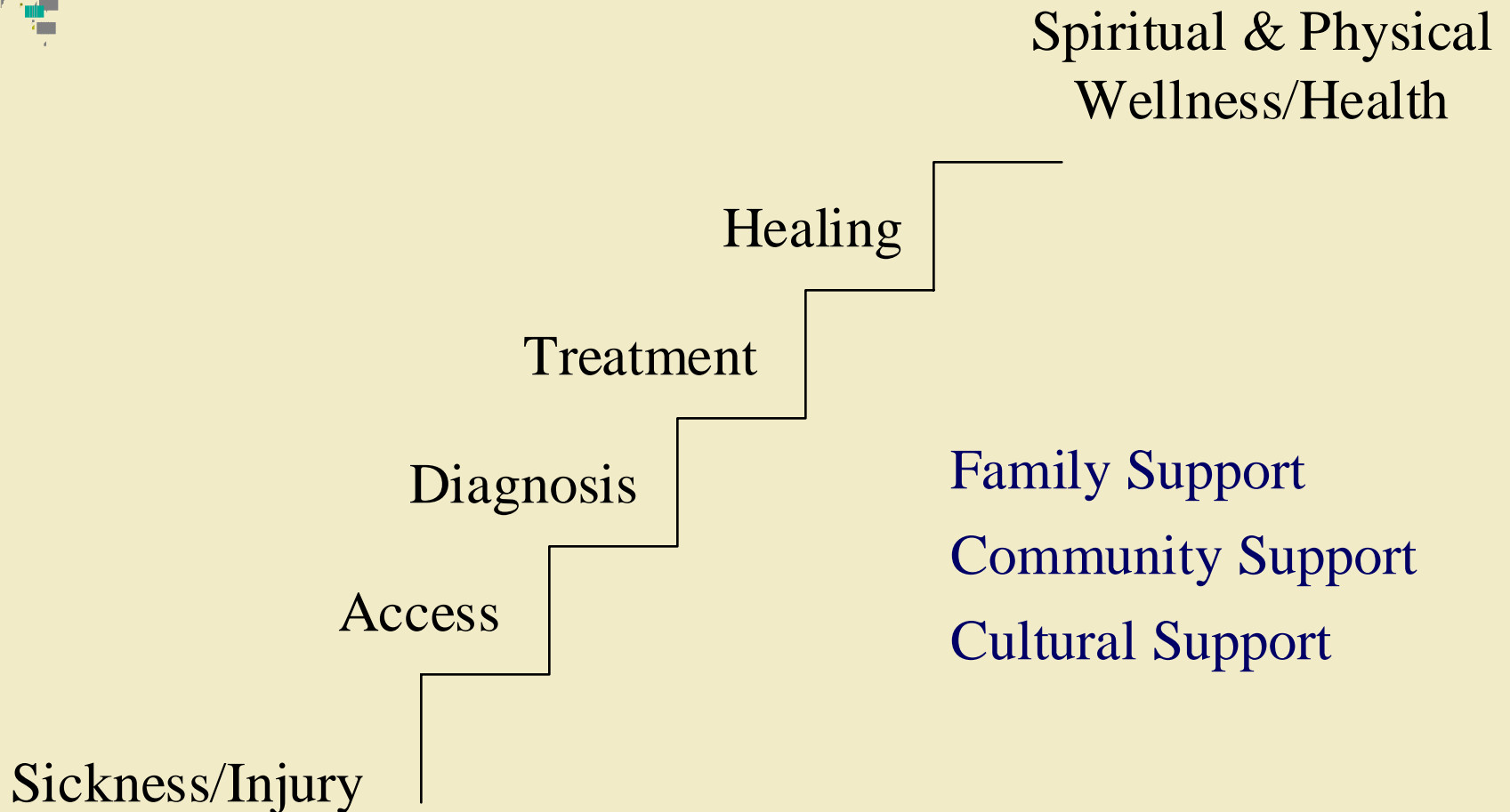
Shiprock, New Mexico

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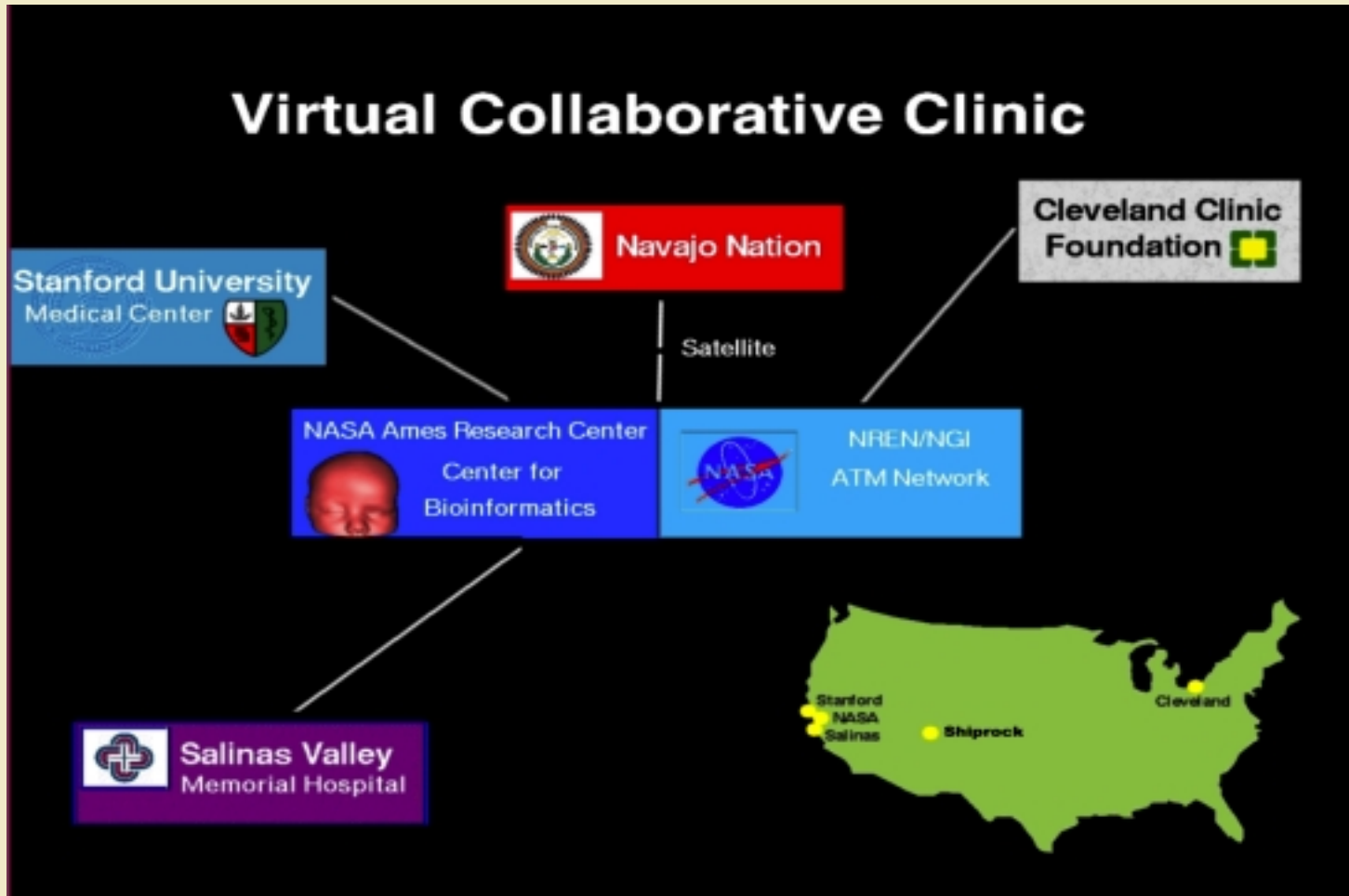
The Path to Wellness



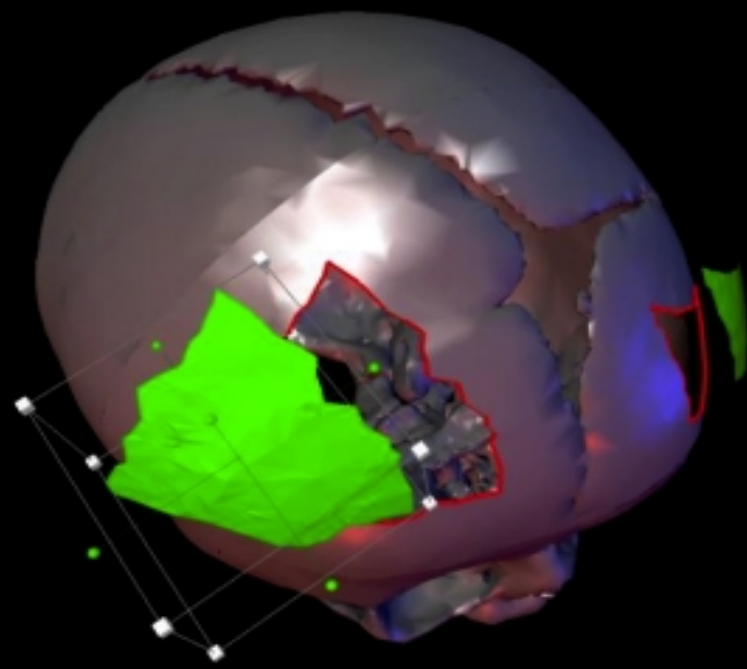
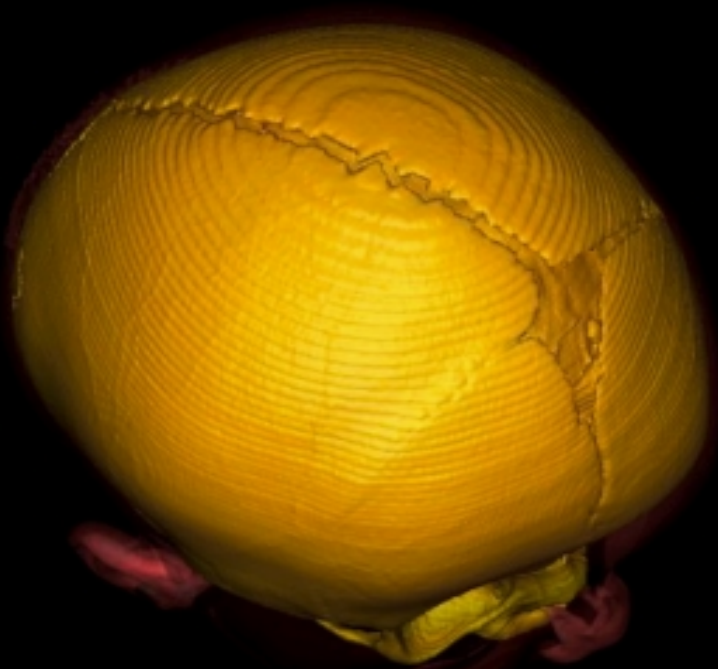
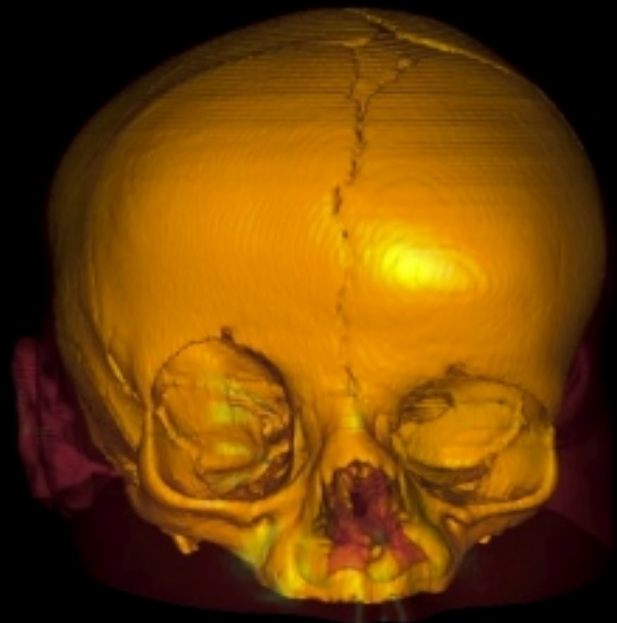


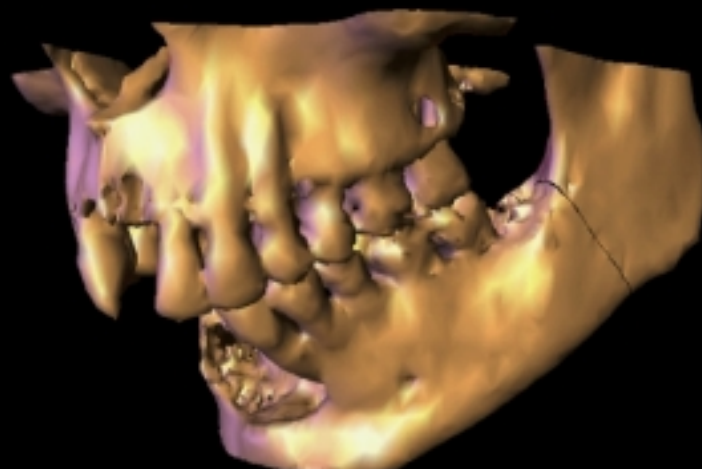
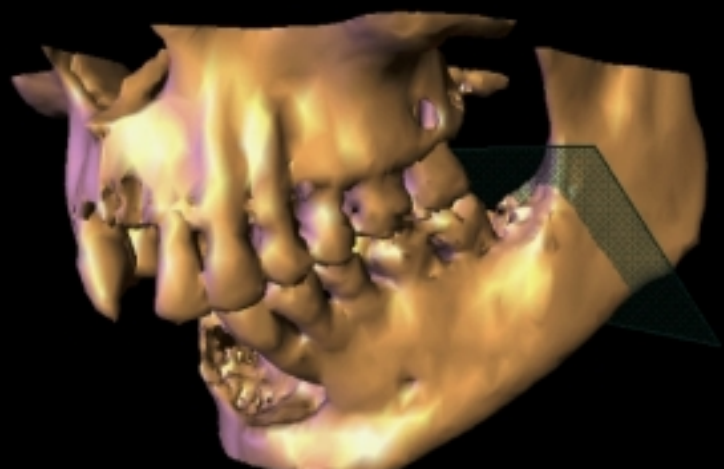
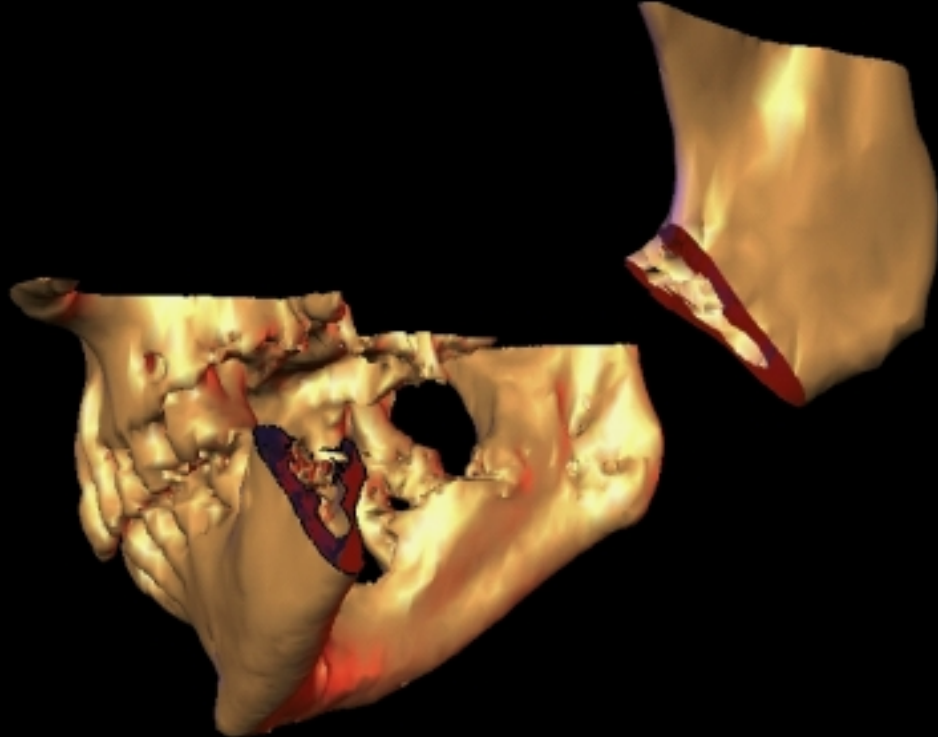
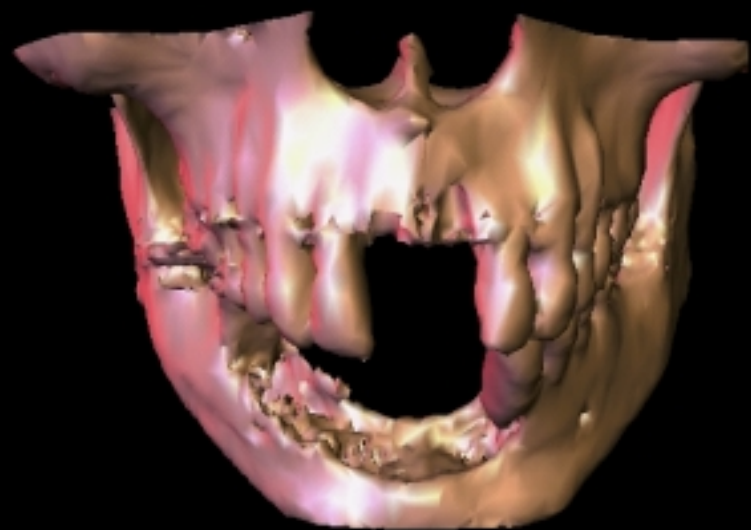
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NASA Partnership



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TOUCH Partnership



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Wireless Demonstration

- Installation of digital microwave link between NNMC and DZHC with 2 T-1 Voice and 10 Mbps LAN connection to NNMC network.
- X-rays that required *1hour* to send via a 56kbps modem now are sent in *30 seconds*.
- X-rays are now filmless and transmitted digitally to the NNMC radiologists in minutes.

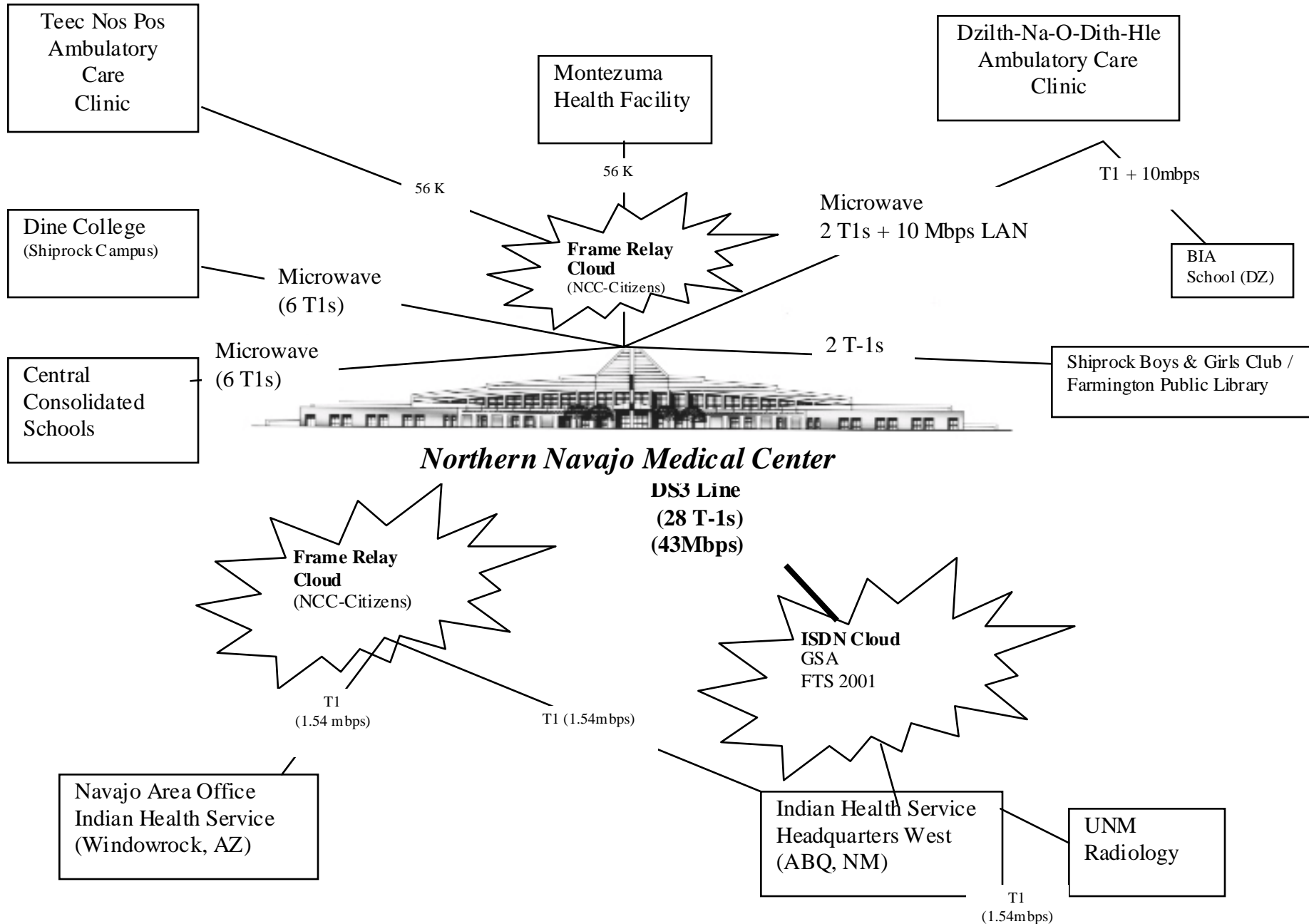


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**BANDWIDTH CAN CHANGE
EVERYTHING!!!**

Conclusion: Telemedicine,
Healthcare, Education, Employment
all dependant on bandwidth

Native America Broad Band High Speed Networking Consortium





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Consortium Goals

- **Take** healthcare to the patient, compared to present day model
- Equalize healthcare/education in rural America
- Push the limits of the Internet (Bridge the Digital Divide)
- Motivate the development of Next Generation Telemedicine/Distance Learning Projects



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Technical Issues / Obstacles

- Local Telcos can not or will not provide necessary bandwidth
- Fractional T-1 or less won't cut it
- Rural America hurting for connectivity
- Quality of Service
 - Resource availability
 - Transmission error
 - Network Reliability
 - Interoperability



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Financial Issues/Obstacles

- Patient care dollars are already limited
- Local Telco
 - DS-3 MCI via USWEST/Citizens to NNMC
 $\$19,864.44/\text{mo} = \709.44 per T-1
- Microwave Solution
 - DS3 MCI to ABQ Fed Bldg $\$1,402.87/\text{mo}$
 - Estimated cost of microwave link from ABQ Fed Bldg to NNMC including MCI charge
 $\$5,000/\text{mo} = \178.57 per T-1



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Shiprock's Internet Connection

- May 3-5, 1999
 - Satellite Link (40 MBps)
 - Compliments of NASA & PanAM Satellite
- Prior to April 2000
 - Fractional T-1 (768 KBps) NAIHS
 - T-1 (ISDN) GSA/HQW
- April 2000 (Consortium)
 - DS3 (28 T-1s)(43 Mbps)GSA/MCI/Citizens



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Final Thought

“Come to the edge.”

“We can’t. We’re afraid.”

Come to the edge.

“We can’t. We will fall!”

“COME TO THE EDGE!”

And they came.

And he pushed them.

And they *flew*...

---Guillaume Apollinaire
(French Poet, Philosopher)

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